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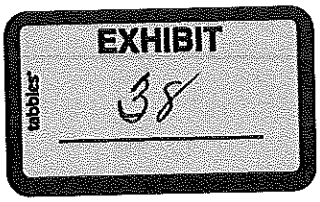

South Central Connecticut Regional Water Authority

Testimony to the Connecticut Department of Environmental Protection

Proposed Stream Flow Standards and Regulations

Connecticut RCSA sections 26-141b-1 to 26-141b-9

January 21, 2010

The South Central Connecticut Regional Water Authority (SCCRWA) is a non-profit, public corporation and political subdivision of the State. Our mission is to provide our customers with high quality water at a reasonable cost while promoting the preservation of watershed land and aquifers. We provide approximately 51 million gallons of water per day to an estimated 430,000 consumers in our region. The source of this water is a system of watershed and aquifer areas that cover about 120 square miles within 24 municipalities. More than 27,000 acres of these watershed and aquifer areas are protected as open space as a result of the Authority's efforts and efforts with partners. Within the 20 member towns of our water district, we own and operate a public water system, which includes 10 active reservoirs, 4 surface water treatment plants and 7 ground water treatment plants. The SCCRWA has a long history of caring for natural environments. We fully recognize that the ways in which we manage our water system and conduct our business are integral to protecting the quality of our region's ecosystems.

SCCRWA POSITION

Water is a key element for a prosperous and healthy community. Healthy streams and aquatic resources are an essential part of sustaining a high quality of life in Connecticut, including countless benefits related to recreation, aesthetics, property values, education, tourism, health, and economic development. Just as critical to Connecticut's future, including regaining economic standing and protecting public health and safety, is ensuring a long-term reliable supply of public drinking water for residents, municipalities, and businesses. The goal of the Connecticut Department of Environmental Protection's (DEP) proposed Stream Flow Standards and Regulations to balance the many diverse and legitimate uses of the state's waters while promoting healthy streams is admirable, and a well crafted stream flow regulation could greatly enhance overall management of the State of Connecticut's water resources. **While the goal of the proposed regulations is laudable, we believe the stream flow regulations do not meet the statutory mandate of "recognizing and providing for the needs and requirements" of public health, public safety, and water supply. We believe it is imperative that the DEP revise its proposed regulations to balance environmental, public health, safety and economic interests and meet the public water supply needs of the residents of the State. Specifically, we cannot support the regulations as drafted until the following recommendations have been adequately addressed:**

1. The intent of the regulations to increase stream flow would potentially benefit many constituents that are not necessarily public water supply customers including the agricultural community, fishermen, hikers, canoeists, private well users, and others who

derive direct use or enjoyment of the state's rivers and streams. However under the proposed regulation, public water utility customers would bear most of the cost of compliance. It is estimated that 15 to 20 million dollars in capital improvements would be borne by SCCRWA customers through higher water rates in order to offset the impact of the regulations on the SCCRWA's water system.

- **We believe the State of Connecticut needs to develop a mechanism to equitably share the cost of the regulations among all citizens and businesses that derive legitimate benefits from the State's streams and rivers.**

2. There will be very significant and costly differences in complying with the Class 1, 2, 3 or 4 stream designation requirements. Under the proposed regulations, the regulated community will not know what classification the DEP will assign to each stream until after the regulations become law. The DEP's 2009 document *Balancing Water Use for Future Generations* states "we anticipate that most existing consumptive diversions will be in Class 3 and Class 4 waters". The SCCRWA estimates that 15 to 20 million dollars for capital improvements will be needed to comply with the proposed regulation. This assumes the Class 3 designation for all SCCRWA water sources. If the SCCRWA receives either a Class 1 or 2 designation for its sources, these capital improvement costs could exceed 100 million dollars.

   - **The DEP should bring more certainty to the impacts on public water utilities and their customers by designating streams identified as existing or future public water supplies in approved public water utility Water Supply Plans as Class 3 or 4 by rule within the proposed regulations.**

3. The current fiscal analysis attached to the proposed regulation prepared by the DEP does not adequately identify or quantify the costs of implementing and complying with the regulation by the state's citizens, state agencies, and municipalities, among others.

   - **The DEP needs to complete an analysis of the cost of these regulations to the state's citizens, including water ratepayers, businesses, and industry and evaluate how these costs may affect Connecticut's future economic development.**

4. While much work has been accomplished by the DEP and its Scientific and Technical Workgroup on the needs of aquatic life, very limited analysis has been done to determine what quantity of water the State's constituents need now and will need in the future.

   - **A comprehensive water-needs study, including analysis of actual consumptive use from both groundwater and surface water sources to determine the quantity of water needed now and in the future by the people and businesses of the state, should be completed by the DEP prior to the adoption of the proposed regulations.**

TECHNICAL COMMENTS

In addition to the fundamental issues discussed above, we have the following technical comments on the regulations that we believe are necessary to both clarify regulatory

requirements and achieve the legislatively mandated balance between human and ecological water needs:

Sec. 26-141b-2. Definitions:

- **The DEP should modify the "run of river" dam definition and exemption to include all dams from which direct consumptive withdrawals are not being made.** Perhaps unintentionally, the proposed definition does not clearly exempt such dams. This recommended change would be consistent with statements made by DEP at several public forums. The proposed modified definition would encourage water utilities to continue to maintain inactive sources for future use. Applying the regulations to these dams, without our recommended modification, would incent utilities to abandon or sell many of these sources and surrounding watershed land.

Sec. 26-141b-3(c). Exemptions

1. **Exemption #12 concerns diversion of water caused by impoundment drawdowns and subsequent refilling for specified purposes, and requires a downstream release of 0.15 cubic feet per square mile of drainage area (cfsm) during drawdown and refilling periods. This should be clarified to state that dams included under exemptions 19 and 20 are only required to release 0.1 cfsm during drawdown and refilling.**
2. **Exemption #19 exempts dams with upstream drainage areas of three square miles or less that release a minimum of 0.1 cfsm of drainage area of water to a river or stream system. Releases should not be required to exceed natural inflow when the inflow drops below 0.1 cfsm, since these streams often consist of small low head dams with minimal storage.**
3. **Small impoundments formed by low head dams with drainage areas greater than three square miles should be eligible for the exemption allowing a constant 0.1 cfsm of release. This could be done either by exempting dams below a certain height, such as 6 feet, or impoundments whose storage capabilities are less than a specified percentage of the median annual flow, such as 10%.** The minimal storage capacity and frequent overflows associated with these impoundments ensure highly variable flow conditions that will mimic natural variations. The incrementally small benefits, if any, to be gained from requiring major modifications and operating rules at these facilities does not warrant the capital and operating expenses that will be needed to comply with the low level release and multilevel release requirements.
4. **Exemption #20, which allows a constant 0.1 cfsm flow release for stream segments between dams that are 1 mile or less in length, should be expanded to include stream segments between dams of any length, provided the affected reservoir(s) are part of the same reservoir system, and that the most downstream reservoir meets release requirements based upon total watershed size.** One SCCRWA reservoir system consisting of five reservoirs includes stream segments between 1 and 1.5 miles in length. A number of factors are evaluated to determine how water levels and storage are managed in this system at a given time, including SCCRWA system-wide

conditions, drought status, raw water pumping costs, and comparative water quality among the different reservoirs. Having to strictly adhere to the multilevel release rule at upstream storage reservoirs in this singly managed system will significantly reduce our operational flexibility. This proposed change will allow for more flexible and efficient management of reservoir storage for water supply needs while maintaining a robust range of release flows downstream of the reservoir system.

5. **There should be a watershed size that is fully exempt (i.e., no release required), such as <1.5 square miles, to avoid over-regulating streams of limited habitat value.** The regulations appear to have no means of excluding streams that are naturally intermittent, ephemeral, or have natural flows that are otherwise too low to create meaningful aquatic habitat. We have a number of small stream diversions with watersheds that range as low as 0.08 to 1.2 square miles where costly physical modifications would be needed to release water and monitor flows. Some small stream diversions that could become regulated are close to 100 years old and consist of small low-head masonry or earthen dams or dug channels. These streams are often intermittent, with impoundment structures that have no means to adjust flow. Instead of making expensive modifications to these diversions and complying with the rigorous monitoring requirements, some utilities might choose to abandon these low yielding supplies. This potential unintended consequence of the draft regulations could lead to the sale and development of utility owned watershed forest land, which could degrade streams that the regulations are intended to protect.

Sec. 26-141b-4(d). Narrative Standards (Class 4)

- **The Class 4 narrative standard should be expanded to include stream segments that would not consistently exhibit flow conditions of Class 1, 2, or 3 streams even in the absence of human alteration. Alternatively, these streams could be exempted from the regulations.** There is no classification available for stream segments that would frequently dry up on a seasonal basis even if flows were essentially unaltered by human activity.

Sec. 26-141b-5 (c)(1)(B)(iv). Demonstration of need for classification change

- **Petitions to change the classification of a river or stream system or segment from a less altered to a more altered classification should not have to include a demonstration that "alternative sources of water, including interbasin transfers and development of new sources currently not utilized, have been and will continue to be utilized to the maximum extent practicable", if these alternatives are not feasible or prudent.** This could lead to unintended consequences by requiring use of alternative sources regardless of whether they might have a greater negative impact on stream quality in other watersheds or are otherwise a poorly suited solution. Also, the language in this requirement, such as continuing to utilize "new sources currently not utilized", is unclear and needs to be rewritten in order to clarify the DEP's intent.

Sec. 26-141b-5 (C). Requirement to submit diversion permit application.

- **Petitions to change the classification of a river or stream system in which the current stream flow pattern is consistent with the stream flow standard for its current classification and the proposed change in classification is required to**

accommodate activities in which a diversion permit is required, should not require submittal of a completed diversion application. It is not reasonable to expect an applicant to incur the major time and expense of completing a diversion permit application given the highly uncertain outcome of a petition to change a stream classification.

Sec. 26-141b-6(a)(2)(C) & 26-141b-6(a)(3)(B). Presumptive standards for Class 4 streams.

- **Flow releases more rigorous than existing practice should not be required for Class 4 streams.** The Class 4 designation grew out of the Advisory Group process as a means of acknowledging that there are streams which are substantially altered from the natural condition and that this alteration is necessary to provide for legitimate human needs and requirements (page 8, January 2009 DEP Framework document Streamflow: The Next Two Decades). The 0.1 cfsm release for Class 4 streams may require expensive dam improvements and installation of stream gauging stations, and will necessitate compliance with monitoring requirements. Requiring a release that results in a less altered stream flow condition conflicts with the stated intent of the Class 4 designation. Moreover, the release rules presented in the regulations for Class 4 streams are not entirely consistent with what was presented on page 18 of the January 2009 DEP framework document Streamflow: The Next Two Decades, which allows for use of existing practice or alternatives acceptable to the Commissioner.

Sec. 26-141b-6(a)(5). Spillage return flow

- **"Spillage return flow" should be defined or substituted with another term, such as "overflows" or "spillway overflows".**

Sec. 26-141b-6(b)(2)(C). Using "best efforts to maintain and operate...as to limit...collective maximum alteration of streamflow..."

- **The DEP needs to clarify how the regulated community will demonstrate compliance with using "best efforts".**
- **The DEP should apply requirements to limit collective, daily maximum (or cumulative) alteration of streamflow only to degraded streams, and only after demonstration by the DEP that individual compliance with the regulations is insufficient. In order to allow sufficient time for analysis of the effectiveness of individual compliance, these cumulative impact requirements should only become effective 20 years after stream classification.**

Sec. 26-141b-6(c). Variances

- **We recommend that the DEP's authority in the regulation to issue variances include the allowance of site specific stream flow management measures in lieu of the presumptive standards that do not warrant the expense and complexity of flow management compacts.**

Sec. 26-141b-6(c)(4). Variance approval conditions

- **The DEP's ability to apply conditions to variances should only apply to entities requesting the variance.** DEP should not have the authority to issue basin wide or state wide withdrawal reductions or operational changes without the consent of the affected parties.

Sec. 26-141b-7. Flow management compacts

Due to the complexity and expense associated with the Flow Management Compact requirements, there is a lack of true flexibility in the proposed regulations to readily plan and implement site specific solutions to stream flow management outside of compliance with the presumptive standards. This creates a real potential for serious unintended consequences that could adversely impact not only water supplies, but also property and aquatic habitats. Many of the dams, diversions, and operations of water utilities have been in place for many decades or even a century, with nearby landscapes developing in concert with their presence. Bypassing flow or re-diverting small stream diversions to their original channels may direct water to properties now occupied by buildings, homes, or agricultural fields, causing flooding and other related water problems. Current operations of some large impoundments take into account the sensitivity of downstream properties by carefully controlling the amount of water released downstream in order to avoid or not exacerbate flooding of yards and basements. In many cases, when reservoir levels are sufficient to meet customer needs, decisions are made to close stream diversions to water supply reservoirs, allowing aquatic biota in these streams to experience more natural flows. Lower reservoir water levels from increased downstream releases will require that these stream diversions remain open more frequently to help replenish reservoir storage, most likely during critical low flow periods. In addition, these lower water levels may threaten aquatic communities inhabiting reservoirs by increasing exposure of littoral spawning and cover areas and/or causing adverse water quality changes. Mitigating the above unintended consequences without violating the regulations will require an efficient and workable process to design and implement site specific flow management measures.

1. **The DEP should provide a less complex and costly alternative to the "Flow Management Compact" procedure alternative in order to facilitate more practical site specific solutions to stream flow management.** While the flow management compact provides an alternative means of compliance to those who may have trouble meeting the presumptive standards, the required preparation and approval process in many cases may be too unwieldy, expensive, and uncertain to be implemented. It requires imposing restrictions on all dams and other structures in the compact's "geographic area". Gathering data and information to prepare such a compact may cost hundreds of thousands of dollars and depends heavily on the motivation and cooperation of other diverters in the watershed. In many cases it may be readily apparent that there are site specific stream flow management solutions that are more preferable than the presumptive standards. Less complex and expensive alternatives to the "Flow Management Compact" process described in the proposed regulations should be available so that common sense solutions can be more readily implemented. The DEP should establish administrative procedures to allow for the singular approval of Management Plans or other vehicle for site specific flow management where multi-party cooperation is not reasonably attainable, warranted, or feasible. As discussed above, use of DEP's authority in the regulation to issue variances may be an appropriate means for allowing site specific stream flow management measures in lieu of the presumptive standards.
2. **The Flow Management Compact process described in the regulations should be reserved for cases where individual diverters are in compliance with the regulations but where the DEP has determined the corresponding river or stream segment is failing to meet the narrative standards for its classification.** The intent

of this process would be to address documented problems that require integrated solutions among multiple parties.

3. **A definition for "geographic area" is needed.** The "geographic area" of a compact determines the necessary geographic extent and participants in a flow management compact yet it is not defined in the regulations.

Sec. 26-141b-8(c)(1). Recordkeeping: daily amount of water diverted or released.

1. **This requirement should be changed to read as follows: "The daily amount of water diverted for each day of operation ~~and~~ OR, for a dam only, the daily amount of water released from the dam during the previous calendar year…"** It should be made clear that under this regulation, dam owners are only required to keep records of water released, not water diverted.
2. **The DEP should clarify whether "daily amount of water" refers to the total volume of water released, an average daily flow rate, or an instantaneous flow measurement taken on a daily basis.**
3. **The DEP should modify the monitoring requirements to be more reasonable and practical.** We believe the cost of the monitoring requirements can be significantly reduced while still furthering the basic intent of the regulations.
    - **We recommend that flow measurements only be required twice per month corresponding with the required evaluation of reference gage flow conditions.** The proposed regulations require daily monitoring of all affected streams regardless of size. This comes with significant capital and operating expenses that are not justified by the potential benefits to the environment. Daily monitoring also implies that daily adjustments will be required to maintain the required flow rates.
    - **For streams that qualify for the exemption to release only 0.1 cfsm, presumptive compliance without the need for flow monitoring should be allowed if the release pipe is configured and sized to meet a minimum flow of 0.1 cfsm when natural inflow is equal to or greater than 0.1 cfsm.**
    - **We recommend that a minimum of 5 business days after the 1st and 15th of each month be allowed to make release adjustments to allow adequate time for staff to review data and make changes and avoid the costly need to dedicate staff on weekends and holidays.**
    - **The regulations should define allowable methods for estimating and measuring releases and withdrawals and other relevant information that utilities will need to accurately assess financial impacts.**
    - **Reasonable provisions should be built into the regulations allowing operators to self-correct occasional violations without risking enforcement action.** The increased complexity and monitoring duties of these regulations will result in unknowing and unintended violations from time to time whether due to human error or technological failures. The March 2005 Waterbury Shepaug River Agreement contains a number of provisions

that allow good faith efforts to remedy individual non-willful failures to meet daily release requirements without penalty.

POTENTIAL ALTERNATIVES

In addition to the above recommendations we urge that consideration be given to the following alternate approaches for developing and/or implementing the regulations:

1. **Serious consideration should be given to selective application of the regulations to degraded streams only.** These streams could be identified through a statewide basin screening process that examines various factors such as flow, habitat quality, watershed factors, and existing aquatic communities and compares them to applicable narrative standards for their assigned classification. This would target limited financial resources toward solving actual as opposed to perceived stream flow issues.
2. **Mitigation of cumulative impacts in degraded stream basins should be encouraged by crediting utilities which enter into wholesale agreements that import water from outside an affected basin, effectively reducing the need for water withdrawals within the basin.** For example, the DEP could expedite permit approvals and lessen permit conditions for new diversions that provide solutions to stream flow management problems.
3. **The DEP could build more flexibility into the regulations by allowing the regulated community to demonstrate compliance with the narrative standards as opposed to the presumptive standards.** For example, periodic stream bioassessments could be conducted to demonstrate whether or not a given stream segment was meeting the narrative standards for its classification. This would shift the current bureaucratic regulatory approach to one that is more results oriented, and forming a basis for applying adaptive management techniques to streams not meeting their flow goals.

While we are confident that the above recommendations will help to achieve balanced stream flow regulations, we realize that there will be many other viewpoints presented in the pubic hearing process. The task of revising the regulations to address all these diverse needs will be a challenging and possibly overwhelming task for DEP staff. We encourage the DEP to bring the stakeholders back together with the Commissioner's Advisory Committee and appropriate workgroups to assist the department in developing the compromises that will undoubtedly be necessary to ensure stream flow regulations that meet the statutory mandate of "providing for the needs and requirements" of public health, public safety, water supply, industry and other lawful uses of the State's waters. The SCCRWA would enthusiastically welcome an invitation to constructively participate in such an effort and to help elicit the involvement of other important stakeholders.